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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,969	03/31/2004	Sergey M. Shevchenko	7759	8693

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EXAMINER

WU, IVES J

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/814,969	Applicant(s) SHEVCHENKO ET AL.	
	Examiner Ives Wu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14,16 and 17,18 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☒ Claim(s) 1-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/14/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 through 13, drawn to a method for making mechanical pulp, classified in class 162, subclass 72.
- II. Claims 14 through 18, drawn to a composition of matter, classified in class 562, subclass 10+.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and process of using the product. The use as claimed cannot be practiced with a materially different product. Since the product is not allowable, restriction is proper between said method of making and method of using. The product claim will be examined along with the elected invention (MPEP § 806.05(i)).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

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Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mike Martin on May 12, 2005 a provisional election was made with traverse to prosecute the invention of Group II, claims 14 through 18. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1 through 13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Line 2,3 in Claim 18 cites: one or more inert compounds **selected from the group consisting of** sodium sulfate **and** ammonium sodium sulfate **and** sodium

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chloride is about 4.5 wt % of sodium chloride, about 0.25 wt % of ammonium sodium sulfate and about 2.25 wt % sodium sulfate, the format of the selective groups for group of inert compounds is improper because Markush terminology requires the phrase "selected from the group consisting of" and the connector "and" between the last two members. See MPEP 2173.05(h).

The phrase in the line 3 of claim 18 cites: "...and sodium chloride is about 4.5 wt % sodium chloride..." which is not a clear statement.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Baehr et al (US004880566).

As to the **water content in the composition of independent claim**

14, Baehr et al (US004880566) disclose as cited: Based on the quantities of **aqueous 35 wt %** hydrogen peroxide solution used, the stabilizer mixtures according to the invention are used in concentrations of from **2 to 25 %** active substance, Col. 3, line 4-8. In other words, the water content is calculated and ranged from **40 % to 63 % wt.**

As to the **polyacrylic acid content in the composition** of **independent claim 14**, Baehr et al (US004880566) disclose as cited: From **1 to 5 wt %** of component B which is polyacrylic acid, Col. 2, line 32.

As to the **diethylenetriaminepentakis(methyl)phosphonic acid, its salt content in the composition** of **independent claim 14**, Baehr et al (US004880566) disclose as cited: Component C polyamine- and/or amine polyphosphonic acid acids, Col. 2, line 25-26; Particularly suitable polyamide and/or amine polyphosphonic acids, if desired in the form of their **alkali metal** and/or ammonium salts, are **diethylenetriamine penta-(methylenephosphonic acid) DTPMP**, Col. 2, line 44-48; from **2 to 20 wt %** of component ©, Col. 2, line 32-33.

As to **inert compound content in the composition** of **independent claim 14**, Baehr et al (US004880566) disclose **5 g sodium persulfate** in example 1 & 2, its content is **2 wt%** and **4 wt%**, Col. 3-4.

As to the limitation of **dependent claim 16**, Baehr et al (US004880566) disclose as cited: Particularly suitable polyamide and/or amine polyphosphonic acids, if desired in the form of their **alkali metal** and/or ammonium salts, are **diethylenetriamine penta-(methylenephosphonic acid) DTPMP**, Col. 2,

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line 44-48; It indicates sodium diethylenetriaminepentakis(methylene) phosphonate is one of their alkali metal form.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baehr et al (US004880566) in view of Christiansen (US004614646).

As to limitation of **dependent claim 17**, Baehr et al (US004880566) **do not teach sodium polyacrylate** in the composition.

However, Christiansen (US004614646) **teaches as cited:** The stabilizing agent is the combination of an amino phosphonic acid, e.g. diethylenetriaminepentamethylenephosphonic acid or its ammonium, alkali metal or

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amine salts together with a **polymer** of an unsaturated carboxylic acid or amide, e.g. acrylic acid **or** its ammonium, **alkali metal** or amine salts and acrylamide, Col. 2, line 56-62; The reaction mixtures were prepared using deionized water and reagent grade salts and solutions. The diethylenetriamine penta(methylenephosphonic acid) DTPMP and **sodium polyacrylate (NaPA)** were commercially available products, Col. 4, Example 1.

The difference between applicant's composition and prior art of Baehr et al (US004880566) composition is the use of alkali metal polyacrylate. In Christiansen disclosure, alkali polyacrylate and polyacrylic acid are presented as polymer agent and interchangeable usage as functional equivalent chelants in a similar aqueous stabilizer mixtures. Thus, it would have been obvious to one of ordinary skill in the art to replace polyacrylic acid with sodium polyacrylate based on their expected interchangeability as functional equivalent chelant, motivated by a reasonable expectation of success. In re O'Farrell.

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The weight percentage of composition disclosed in claim 15 overcomes that of the prior arts.

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Claim 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-1114.

The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 20, 2005



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700